

**Abstract of the Disclosure**

[0121] Various traveling wave grids and related systems are disclosed that are particularly beneficial for the separation, transport, and focusing of biomolecules or other charged species. An implementation of a vertically integrated traveling wave module is described which allows for scalability to arbitrary gel dimensions through tiling. In addition, several unique traveling wave algorithms are also described which when used in conjunction with the traveling wave grids, impart selective motion to biomolecules or other charged species.

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